

# ENRICHMENT BEST PRACTICES: STEM

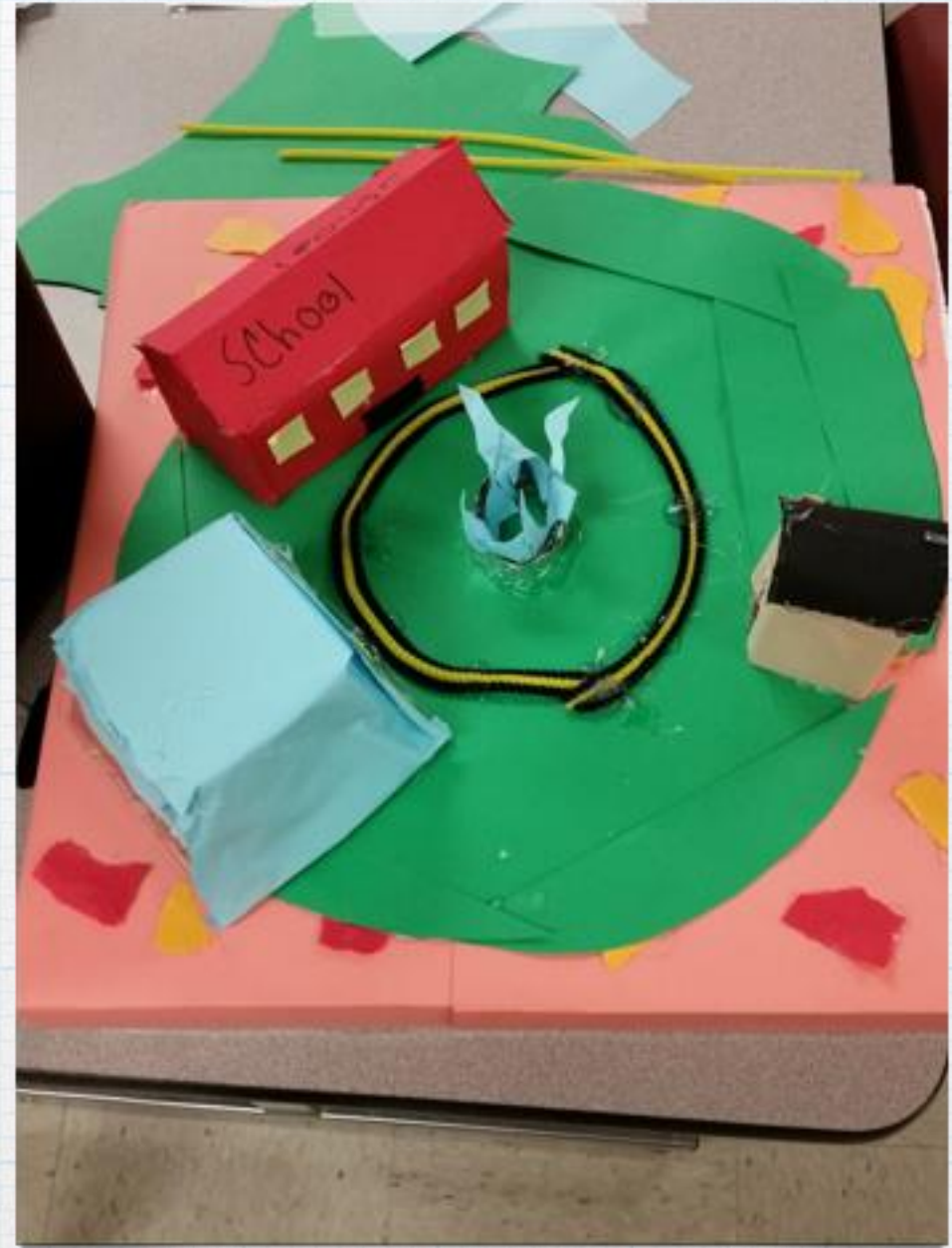
KAROLINE BERG  
SHANDA SINNETT  
MARCELLA WOOD

CARROLL COUNTY PUBLIC SCHOOLS



# WHAT IS PROBLEM BASED LEARNING?

- STUDENT CENTERED LEARNING
- EXPERIENCE THE LEARNING
- OPENED END QUESTION
- CROSS CURRICULAR








# LOST IN SPACE

VIDEO OF OUR PROGRAM




# LOST IN SPACE PBL

## JOURNEY TO MARS

 Math:  
The Number  
System, Ratios and  
Proportions, Expressions  
and Equations, Geometry



 English: George's  
Cosmic  
Treasure Hunt.

 Robotics: Mars  
Challenge



# DAILY SCHEDULE

8:30-8:45 BREAKFAST/HOMEROOM

8:45-9:20 ROTATION 1

9:20-9:55 ROTATION 2

9:55-10:30 ROTATION 3

10:30-11:30 PBL

11:30-12:00 LUNCH

12:00-1:30 CARROLL WELLNESS CENTER

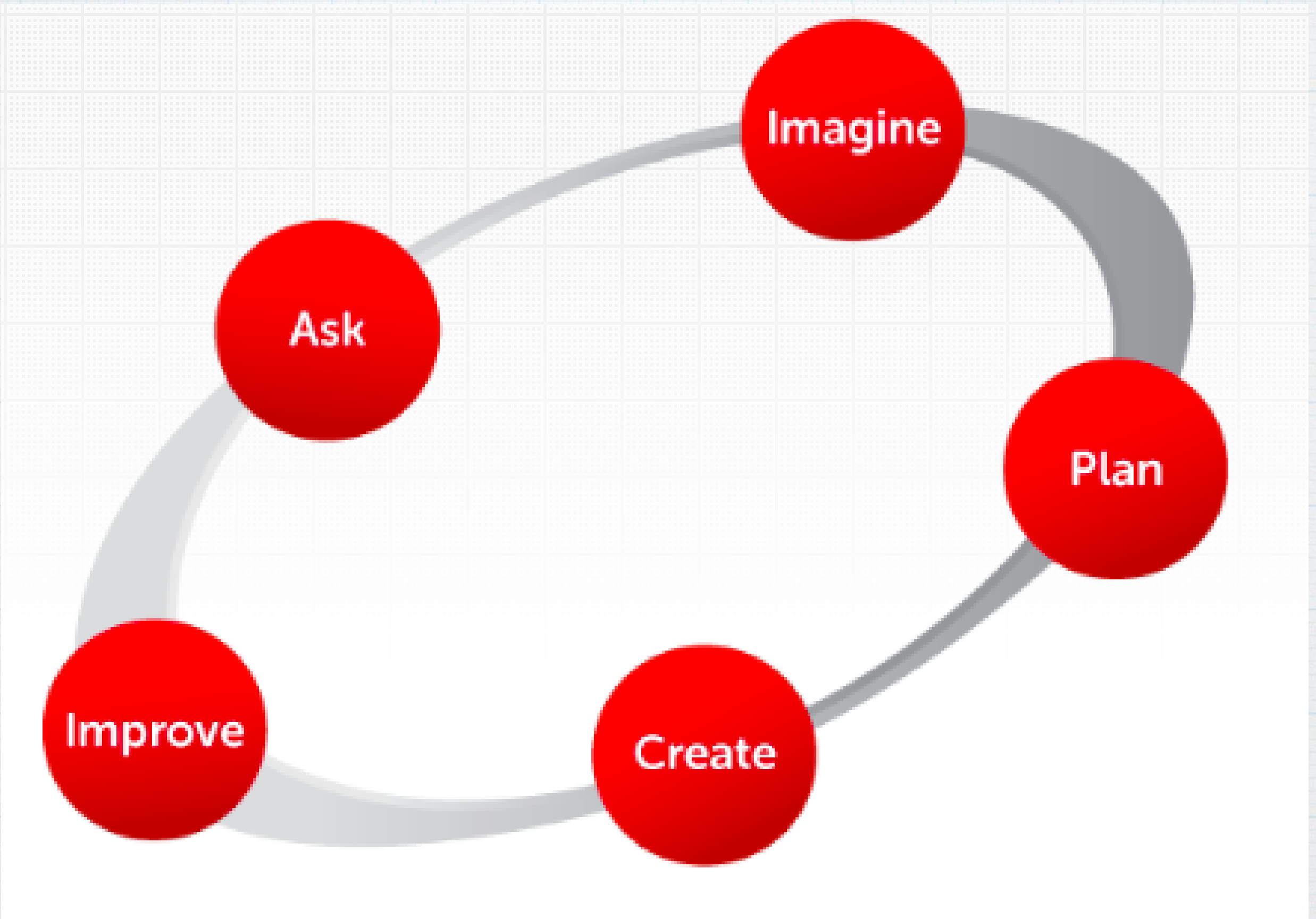


# JOURNEY TO MARS

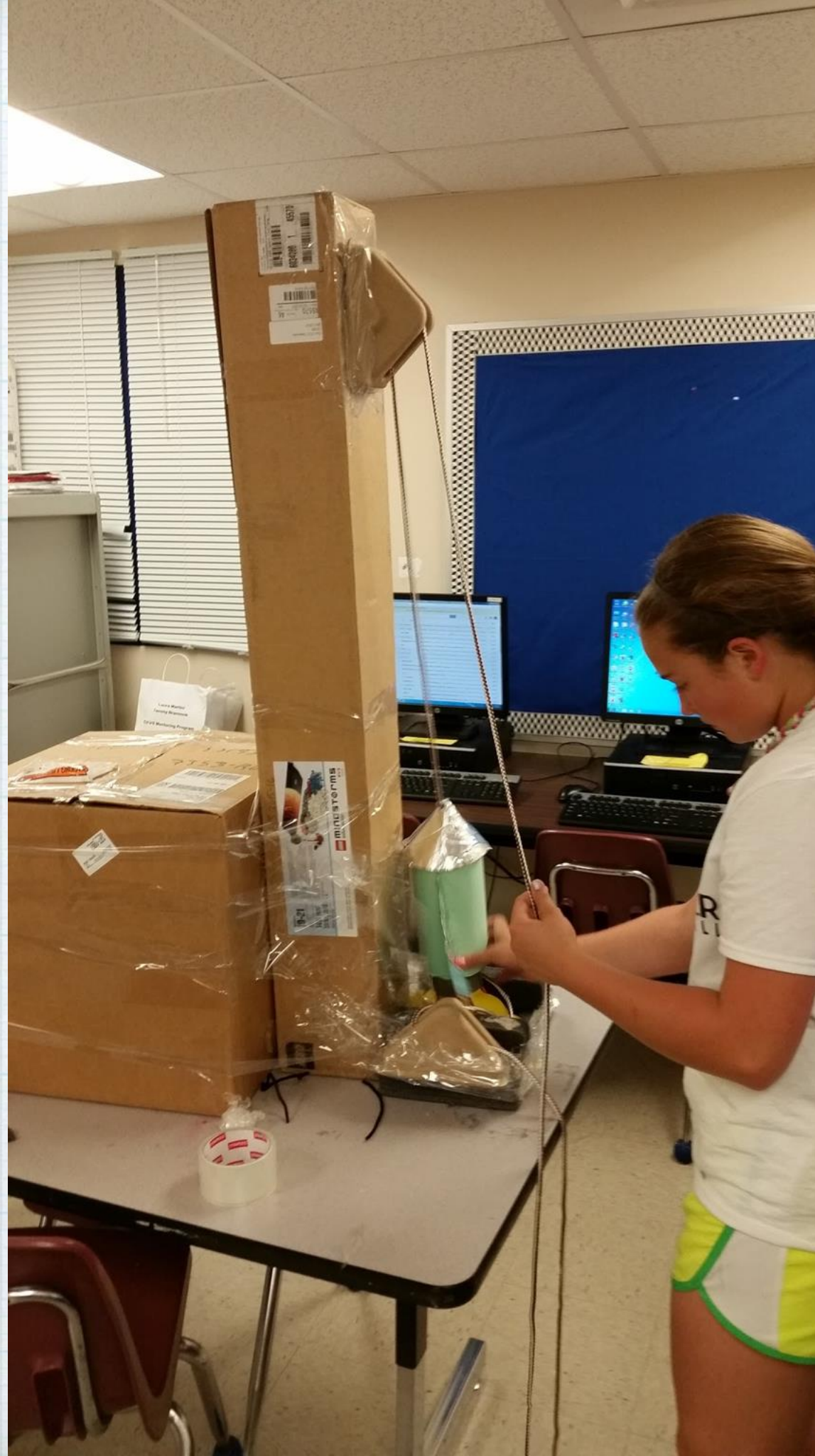
THE STUDENTS WERE PRESENTED WITH THE CHALLENGE OF CREATING A PLAN FOR A COLONY ON MARS. THEIR PLANS INCLUDED:

- . TRANSPORTATION PLAN
- . GOVERNMENT PLAN
- . SCALED MAP
- . THREE DIMENSIONAL MODEL OF AT LEAST ONE BUILDING
- . PRESENTATION DISPLAY

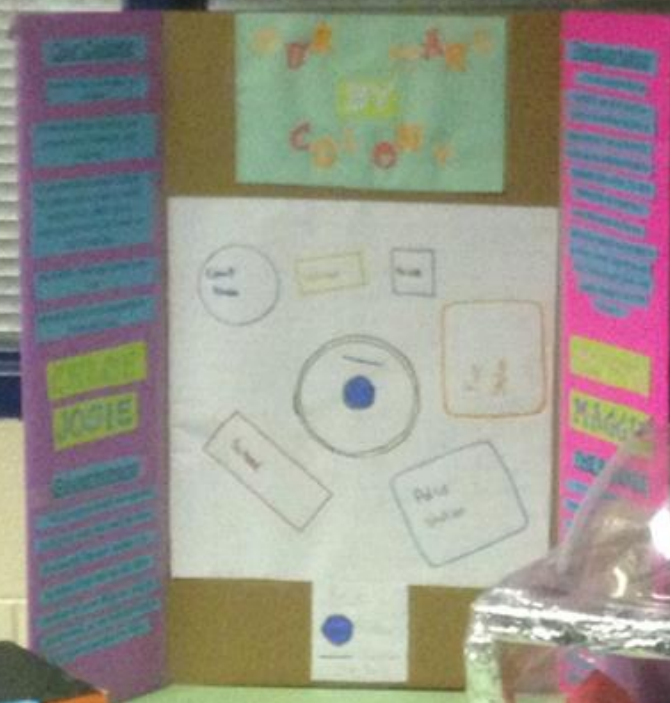
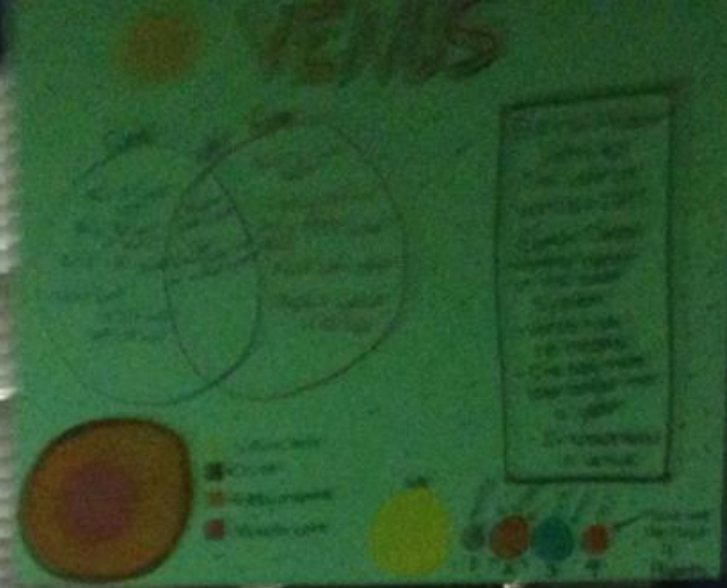




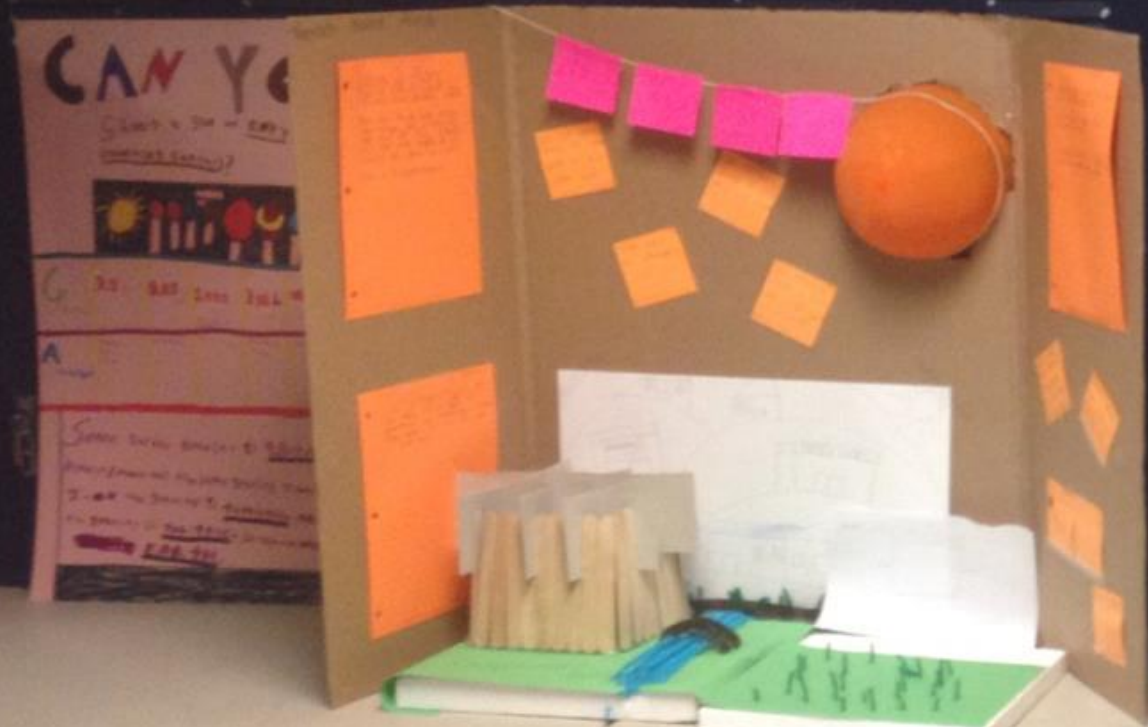














# MATH

SCIENTIFIC NOTATION

SURFACE AREA AND VOLUME

SCALE AND SCALE FACTOR

SPEED AND VELOCITY EQUATIONS



# ENGLISH



## INQUIRY-BASED READING



# ROBOTICS





# SCIENCE

BALLOON ROCKETS

SOLAR OVENS WITH S'MORES

CANISTER ROCKETS

FIELD TRIP: RADFORD PLANETARIUM



















# LOST IN SPACE PBL


THE BALLOON  
CHALLENGE AND  
ROBOTICS

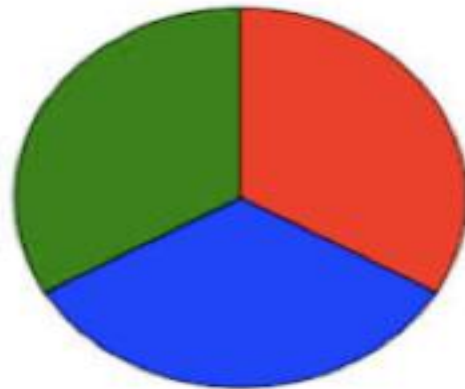





# PLANNING PROCESS

- . BEGIN WITH THE END IN MIND
- . COLLABORATIVE

 Math:  
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and Equations, Geometry



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Treasure Hunt.

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# PLANNING PROCESS

AS THE PROGRAM WAS GOING, WE  
FOUND IT NECESSARY TO HAVE A  
MEETING EACH DAY TO DEBRIEF THE  
DAY AND PLAN FOR THE NEXT DAY  
WITH OUR STAFF.



# ADVANTAGES

- . PARENT INVOLVEMENT
- . ENROLLMENT INCREASED
- . DIFFERENTIATION
- . DISCIPLINE
- . CONSISTENT ATTENDANCE











# QUESTIONS

[ksberg@ccpsd.k12.va.us](mailto:ksberg@ccpsd.k12.va.us)

[sksinnet@ccpsd.k12.va.us](mailto:sksinnet@ccpsd.k12.va.us)

[mawood@ccpsd.k12.va.us](mailto:mawood@ccpsd.k12.va.us)